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## Stem Cell Metabolism and Therapy in Reproductive Endocrinology

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submissions:

**closed (31 December 2023)**

### Message from the Guest Editors

Dear Colleague,

Stem cell-based therapy has been shown to be beneficial and effective in various degenerative disease conditions. Various preclinical and phase I clinical trials have demonstrated that MSCs exert their regenerative properties in ovarian tissue through their paracrine and metabolic mechanisms, such as neo-angiogenic, anti-fibrotic, and anti-apoptotic mechanisms. Recently, MSC derivatives such as extracellular vesicles (EVs) have gained importance through entering several clinical trials as they offer cell-free therapeutics for regulatory approval.

Gynecological conditions such as uterine fibroids and endometriosis have a significant impact on women's quality of life. Both conditions have been reported to negatively affect women's fertility and to originate from stem cells in myometrium or endometrium, respectively. Developmental reprogramming of those stem cells can result in their transformation towards disease. Understanding the role of stem cell metabolism and immune modulation in the pathogenesis of these conditions is paramount in developing preventive/therapeutic strategies, especially in women at highest risk due to their ethnicity.



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# Special Issue



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## Message from the Editor-in-Chief

The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating mechanisms which underlie fundamental biological processes including disease pathology. *Metabolites* is proud to be part of the development of metabolomics and we look forward to working with many of you to publish high quality metabolomic studies.

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